

# OFFICE OF ENTERPRISE TECHNOLOGY



FY 2017 | BUSINESS VALUE REPORT



## In brief

**VISION:** to be recognized as a first-class technology organization by the customers we serve.

### FY 2017 HIGHLIGHTS

**David L. Stevens**

Chief Information Officer



## Thank You

Welcome to OET's FY17 Business Value Report! I am pleased to share OET's contributions in support of the County's mission to improve customer service and lower cost of operations.

This report demonstrates that, with OET's Strategic Plan as a guide, we realized improved results for the County in the areas of Customer Experience, Service Quality, and Service Excellence. Highlights of the report include the County's new website, financial transparency portal through OpenGov, Enterprise Resource Planning (ERP) system, and other initiatives delivered as part of OET's commitment to create business value through an improved technology landscape.

OET's ability to deliver on FY17 initiatives is due to its dedicated hardworking employees and the partnerships established and maintained with our customers. It is through these partnerships that we are able to provide technology solutions that enable the County to improve its service delivery, including digital government initiatives. FY18 will continue our Strategic Plan's emphasis to support the County's mission by using technology to enable new customer experiences.

In closing, I appreciate the continued support of the Board of Supervisors, County Management, and County leadership as we continue bringing business value to the County and the public served by the County.

**David L. Stevens**, Chief Information Officer

### Our Performance

OET is committed to customer service, improved reliability, and lower cost of operations.

#### FINANCIAL

**3.8%**

DECREASE FOR FY17  
OPERATING BUDGET

#### PUBLIC SAFETY



**99.875%**

RADIO NETWORK UPTIME

#### SERVICE

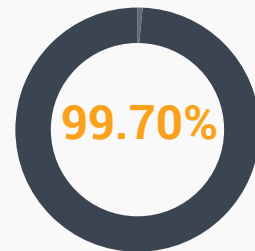


**47,175**

SERVICE DESK REQUESTS AND  
INCIDENTS

**5 MINUTES, 29 SECONDS**  
AVERAGE CALL DURATION

#### RELIABILITY



ENTERPRISE NETWORK  
UPTIME

#### TRAINING



**\$888**

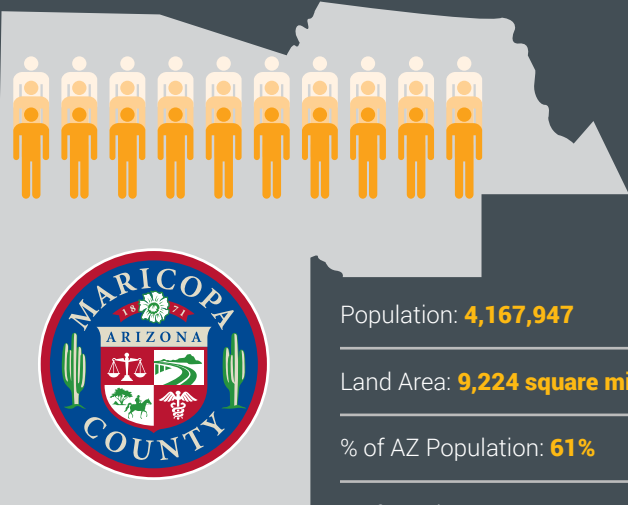
AVERAGE TRAINING  
INVESTMENT PER  
EMPLOYEE

STATISTICS

OET is focused on measuring performance and reporting on that performance to foster continuous improvement.



MARICOPA COUNTY



Population: **4,167,947**

Land Area: **9,224 square miles**

% of AZ Population: **61%**

# of Employees: **14,288**

# of Departments: **55**

**4th Largest** County in the Country

PUBLIC SAFETY RADIO



**8,764**

WORK ORDERS COMPLETED

**99.875%**

RADIO NETWORK UPTIME

**96.66%**

WORK ORDERS COMPLETED  
IN 2 DAYS

OET



PEOPLE

**210**  
EMPLOYEES



FINANCIAL

**3.8%**  
DECREASE FOR FY17 OPERATING  
BUDGET



SERVICE

**47,175**  
SERVICE DESK REQUESTS AND  
INCIDENTS



RELIABILITY

**99.70%**  
ENTERPRISE NETWORK  
UPTIME

**\$888**  
AVERAGE TRAINING  
INVESTMENT PER  
EMPLOYEE

REDUCED CAPITAL REQUIREMENTS  
BY  
**\$43,851,394**

**36 SECONDS**  
AVERAGE TIME TO ANSWER

**5 MINUTES,  
29 SECONDS**  
AVERAGE CALL DURATION

**83.29%**  
% OF TICKETS RESOLVED  
WITHIN 1 HOUR WITHIN THE  
CUSTOMER SERVICE CENTER

**175**  
TELECOM ROOMS  
MODERNIZED

**6,900**  
USERS MIGRATED TO  
NEW NETWORK

**132**  
CIRCUITS UPGRADED FOR  
ADDITIONAL BANDWIDTH

**100%**  
UPTIME FOR PHONE AND  
UNIFIED COMMUNICATION



## AWARDS

NACo Awards Received by OET



### Data Center Colocation

In May of 2015, OET completed the move of its data center to the hosted data center facility, including connecting the data center to a recently implemented 100 GB Optical Network Services (ONS) ring and OET's hosted data center for disaster recovery. The target data center, hosted by a global data center leader, was built to exceed the Tier 3+ standard that is now expected in large enterprise organizations like Maricopa County.

### Environmental Health

The Maricopa County Environmental Services Department maintains inspection results from food establishments such as restaurants, retail stores, school cafeterias, and mobile food trucks. In August 2015, these inspection results were made available to the public through a new Mobile Restaurant Ratings tool.

### GIS Case Management Workflow

Utilizing the Human Services Case Management application (HSD Online), OET developed a GIS mapping application utilized by HSD management and employees to improve the accuracy, efficiency, and responsiveness of caseworkers who serve this community on a daily basis.

### Network Infrastructure Modernization

OET implemented a network modernization initiative to re-architect the County's network infrastructure including the replacement of end-of-life equipment, improved network routing, and establishment of a carrier-grade Optical Network Services (ONS) ring that connects the County's major campuses and technology hubs.



### 2017 Beacon Award – David L. Stevens

Presented by Center for Technology in recognition for outstanding performance and excellence in information technology.

### Palo Verde Evacuation

The application of GIS data provides user-friendly access to critical citizen information for responders to use in coordination of yearly tabletop exercises to test emergency policies and procedures, and that would be used during an actual evacuation of this community.

### Risk Recycling Website

Risk Management developed a process and established a Risk Recycling website to inform Maricopa County departments on how to recycle waste materials from County operations that may be hazardous to the environment or could result in contamination of ground or water and recycles them, free of charge to the departments.

### Threat Management Program

The Threat Management Program is represented as the first line of the defense in an organization's security posture and identifies threats and responds to identified incidents.



# Customer Experience



*Using the County's Unified Communications technology, Maricopa County Justice Courts improved the efficiency of coordination and decision making among our 26 geographically dispersed courts. Site managers and judicial officers use the video conferencing equipment installed at our five regional centers to hold meetings 'in-person' without having to travel to our administrative office. Thanks to this technology, we have seen beneficial reductions in both the time and cost of travel for meetings."*

**TIM DAHLSTROM, DIRECTOR OF OPERATIONS & IT,  
JUSTICE COURTS**

## Content Management System (CMS) Launched on February 14, 2017

The new CMS replaced the legacy internet presence implemented in 1995 and allowed Maricopa County to improve its public facing websites ([www.maricopa.gov](http://www.maricopa.gov)), in part, through enhanced interaction with its citizens and community.

### BUSINESS VALUES:

- By utilizing the current web technology, Maricopa County has a website that is visually appealing along with a responsive design, accessible on modern mobile devices.
- Runs on Software as a Service (SaaS) platform with an uptime performance guarantee of 99.99%.
- Established a strong search engine, which allows citizens to search across the site for relevant content or to do more specific searches within departments.
- Allows Maricopa County departments to maintain/update respective web content (decentralized content publishing).





## Accela

Completed migration from Accela version 7.1 to the latest 8.0 version furthering progress on planned move to a hosted service.

Currently utilized by several County departments including Planning and Development, Department of Transportation, Flood Control, and Environmental Services to help conduct, track, monitor, perform, and report business services provided to the community.



## BUSINESS VALUES:

- With the migration to 8.0 and moving to a hosted environment, the County is on the most current platform with the latest features that bring efficient business processes and services to the citizens of Maricopa County.



## OpenGov - Launched on February 14, 2017

In conjunction with the County's new Content Management System, OpenGov provides citizens, stakeholders, departments, and the public with access to view financial transactions in an intuitive manner – including charts and graphs. It also enables performance dashboards and other opportunities for providing open data views.



<http://www.maricopa.gov/881/Open-Government>

## BUSINESS VALUES:

- The OpenGov platform is structured from the County's defined Chart of Accounts and provides detailed financial information on all funds and departments within the County.
- The project provides citizens an unprecedented view into the County's budget and associated performance.
- The hosted OpenGov product provides information securely, reliably, and cost effectively.





## Closed Captioning for formal BOS meetings - Launched on April 12, 2017

OET, working with the Office of Communications, completed the launch of closed captioning for formal board meetings. At the close of the meeting, Supervisor Bill Gates recognized and appreciated that the County now has captioning available for our residents and anyone else tuning in.

### BUSINESS VALUES:

- By adding captioning the County is now able to start broadcasting on Channel 11.
- Congress requires all cable providers to close caption their programs.



OET's move to a new service management platform allows us to deploy our internal resources faster and more accurately than we had prior. We pride ourselves on our self-sufficiency wherever possible, and we have plans to use the new OET Service Center to manage more of our own IT services through this consistent and reliable toolset."

ASSESSOR'S TECHNOLOGY DIVISION

## OET Service Management System (SMS) OET Service Center

OET expanded OET Service Center capabilities to provide improved management of service tickets, including automated notification for closure of tickets. Additionally, OET worked with Human Services and the Assessor's Office to migrate their legacy system to OET Service Center.

### BUSINESS VALUES:

- Improved service delivery and customer satisfaction.
- Reduced costs associated with decommissioning the legacy help desk system and related service components.
- Created potential for IT departments to have common statistical reporting capabilities thus providing a useful view into the use of technology throughout the County.
- Reduced costs associated with maintenance for separate components of service management systems.

# Service Quality



“Working with Maricopa County’s GIS Section has been incredible. Never have I come to them with an idea and received no for an answer. They partnered with us for the ‘soft launch’ of the Active Operating Picture (AOP) into a command and control environment at the Final Four and it could not have gone better. AOP enables improved coordination of cross-jurisdictional resources during the event. The Criminal Intelligence Division looks forward to continued partnership.”

MARICOPA COUNTY SHERIFF’S OFFICE CRIMINAL  
INTELLIGENCE DIVISION.

## New Enterprise Resource Planning (ERP) System Launched on July 6, 2016.

Successfully implemented an integrated County-wide Government ERP system that is fully integrated and modernized to improve the timeliness and accuracy of critical information sharing necessary to provide transparency for staff and leadership.

### BUSINESS VALUES:

- Eliminated the risk of catastrophic failure inherent in the legacy system for budgeting.
- Minimized customizations in the interest of simplifying future system upgrades. Ultimately, the Project utilized 3,727 hours for customizations leaving 1,273 hours ‘in the bank’ for future customizations.
- Decommissioned several legacy systems for budgeting (Managing for Results), Finance and Procurement (Advantage 2x), and infoAdvantage Reporting.



### Streamline and Improve Processes

We worked with **several County departments** to further their efforts to leverage technology, including:

- CHS radiology custom web application implemented to track X-Ray appointments for inmates, which allows CHS to keep more meaningful data efficiently.
- Assisted Ryan White to allow their support application, CareWare, to utilize County email services. This automated personnel updates and transitions, significantly reducing support required by a third-party consultant.





### Securing the Enterprise

We worked with **many County departments** to prevent the compromise of county-wide assets and mitigate the risk to citizens, employees, data, and IT systems.

**Program elements include:**

- Security Architecture** – Improvements in the “Defense in Depth” program continue to add value, ensuring data is secure and safe
- Awareness and Collaboration** – Training on security best practices and partnerships to encourage adoption
- Cyber Assurance** – Department assessments encourage improvement and provide opportunities to learn collaboratively
- Security Operations** – Improvement in our security posture through tools focused on cyber security threat mitigation

<p>Protected the County against known malware and ransomware attacks</p>	<p>Increased awareness of cyber risks through coordinated training events</p>	<p>Continued to block denial of service events by migrating DNS to a tier 1 Denial of Service protection provider</p>
<p>Implemented and utilized an Incident Response Plan, reducing risk to the County</p>	<div>50%</div> <p>Over 50% increase in County employees using email encryption to help safeguard confidential information</p>	<p>Reduction in attempted sensitive data exfiltration through software tools targeted to ‘catch’ high-risk or confidential information before it leaves the County</p>
		<p>Increased security awareness leading to <b>329</b> incidents reported to information security operations which resulted in significant decrease in response time</p>

# Service Excellence



“OET is proving to be a trusted service partner. They stepped-in to stabilize a critical application and organized a team with multiple vendors to move the application into the County’s enterprise data center to provide long-term stability and high-availability.

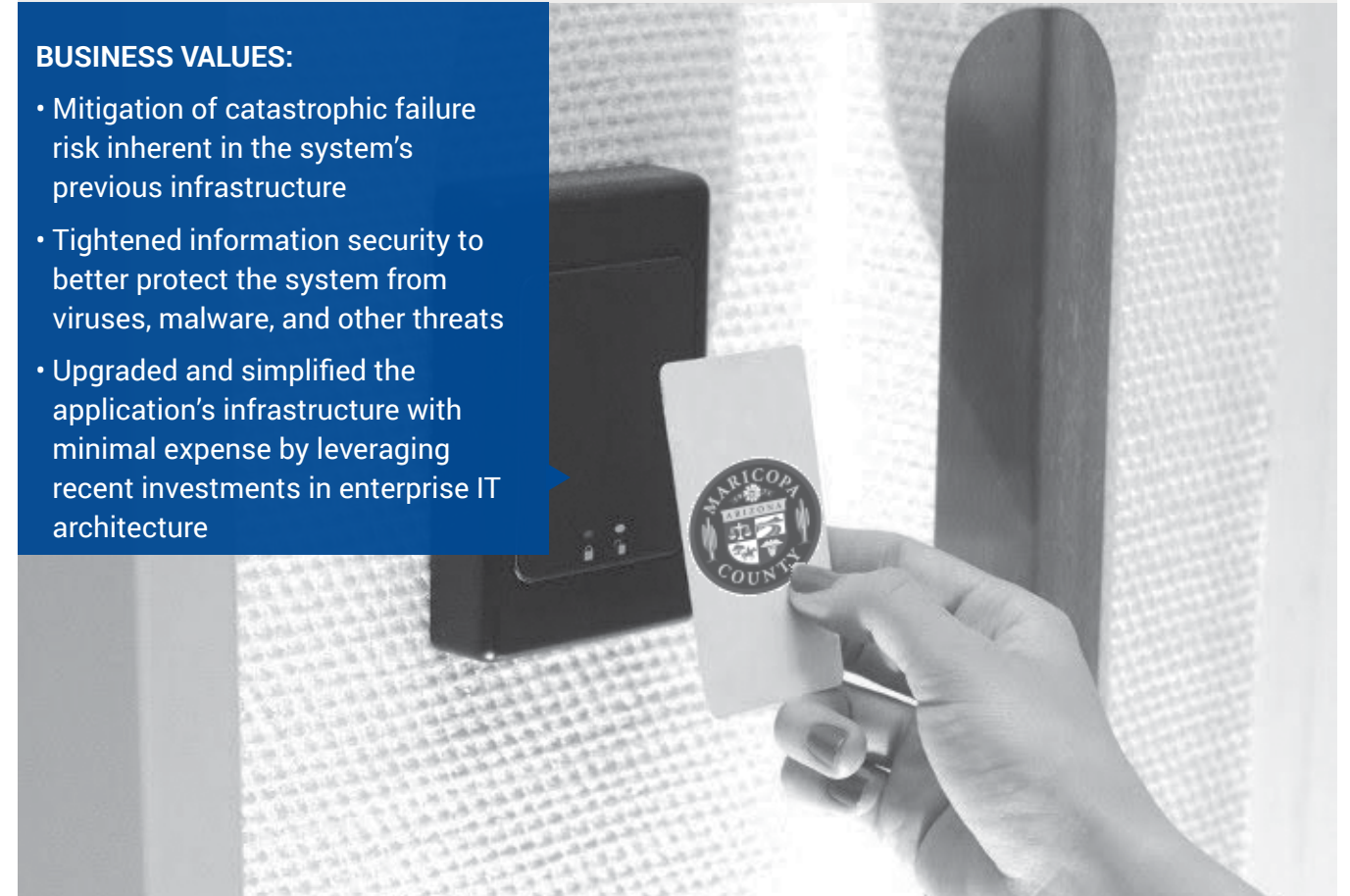
KEN BURT, FACILITIES MANAGEMENT DEPARTMENT

## Security Services – Velocity Badge Access System

OET worked with Security Services and FMD to stabilize the infrastructure supporting the County’s physical security (badge access) control system. The mission-critical system is used by all departments and controls access to over 3,300 doors and monitors over 1,300 panic alarms throughout the County. Upon successfully stabilizing the existing infrastructure, OET led the effort to migrate the application from dated and non-redundant resources into the County’s highly available enterprise data center to provide a long-term solution.


### BUSINESS VALUES:

- Mitigation of catastrophic failure risk inherent in the system’s previous infrastructure
- Tightened information security to better protect the system from viruses, malware, and other threats
- Upgraded and simplified the application’s infrastructure with minimal expense by leveraging recent investments in enterprise IT architecture



## Customer Self-Service Mobile Devices Provisioning and Activation

OET in partnership with the Public Defenders department identified an opportunity in the mobile device provisioning and activation process to eliminate backlogs in providing services. OET recognized a customer self-service process would provide departments with flexibility and control to manage this process without reliance on OET.



*“Having the capability to provision and activate our own cellular devices provides our employees a faster turnaround time which in turn assists in keeping our office running efficiently and assists in offering our clients professional and quality representation.”*

– Tiffany Schian,  
Public Defender

### BUSINESS VALUES:

- Provides customers the choice to self-service their mobile devices.
- Improves the turn-around time from ordering a mobile device and placing that phone into service.
- Created efficiencies in use of employees’ time.

## Public Safety Radio System

This is the largest technology focused project underway within the County and is critical to many departments including the Maricopa County Sheriff’s Office and Adult Probation Department. OET has nearly secured all of the real estate necessary. Furthermore, OET completed or began construction at several sites. This five-year project is on-track for completion within budget and on schedule in 2019.

### BUSINESS VALUES:

- 48 of the 59 sites fully acquired: 81%
- Construction completed or near completion at 42 of the 59 sites: 71%
- All 6,607 County owned user mobile and portable radios upgraded: 100%
- To date, 29 land agreements associated to the project (IGA’s, lease agreements, land purchases, BLM lease agreements, and Tonto National Forest license agreements) fully executed by the Board of Supervisors

### EFFICIENCY OF CURRENT PUBLIC SAFETY RADIO SYSTEM

- 98.86% of the 11,170,000 radio calls processed through the Public Safety radio system were connected on users’ first call attempt.

## Hassayampa Acquisition



Maricopa County Parks and Recreation Department acquired the historical Hassayampa River Preserve from the Nature Conservancy. This remote site required quick attention from OET to provide reliable network connectivity and telephone services. OET provided site surveys and worked closely with the Parks Department in generating the plan successfully executed for providing services to this rustic and exquisite addition to Maricopa County Parks system.

### BUSINESS VALUES:

- Provided citizens a magnificent new recreational resource.
- Enabled a Point of Sale (POS) system at the historical building sites.
- Provided wired and wireless network connectivity.
- Extended the County’s new Voice over Internet Protocol (VoIP) telephone system to the site.



## Communication Improvements for OET Service Notifications

OET improved its alerting system for system activities (planned maintenance, service disruptions) so that County IT departments and other interested parties are fully aware of network, software, and systems' operational status.

### BUSINESS VALUES:

- County employee awareness via a single source of truth for OET activities.
- A central site for current system status and alerts.
- An optional opt-in method for being alerted directly via email and text messaging.
- Increased staffing efficiencies through reduction of inquiries previously made to the CSC due to unknown system status.
- A standardized format for dissemination of system information.
- Increased customer satisfaction by solving a long-standing challenge of effectively communicating relevant information to appropriate parties.



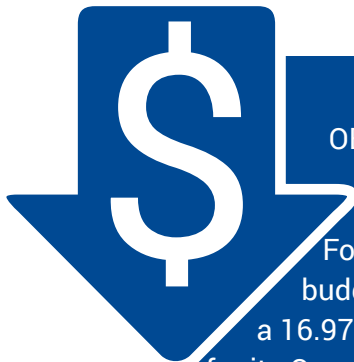
## Lower Cost of Service

OET continued its focus on lower cost of operations and continued trend for reducing capital requirements.

For FY17, OET's budget reflected a 16.97% decrease for its Operating Budget – including General Fund Operating, Major Maintenance, and One-Time expenditures.

OET reduced its capital requirements by \$43,851,394 compared with FY16.

Overall, including Capital Improvement Projects (CIP), OET's FY17 budget reflected a **decrease of 39.08%** when compared with OET's FY16 budget.



## Improved Reliability

Continued activities **to ensure the systems and applications the County and citizens rely on are highly reliable and available.**

- **Enterprise Network Uptime of 99.70%**
- 6,900 users migrated to new network
- 12,216 devices migrated
- 175 telecom rooms modernized with HVAC, power, and cabling
- 305 legacy devices removed
- Project spanned **40** buildings, three campuses, and 26 remote sites

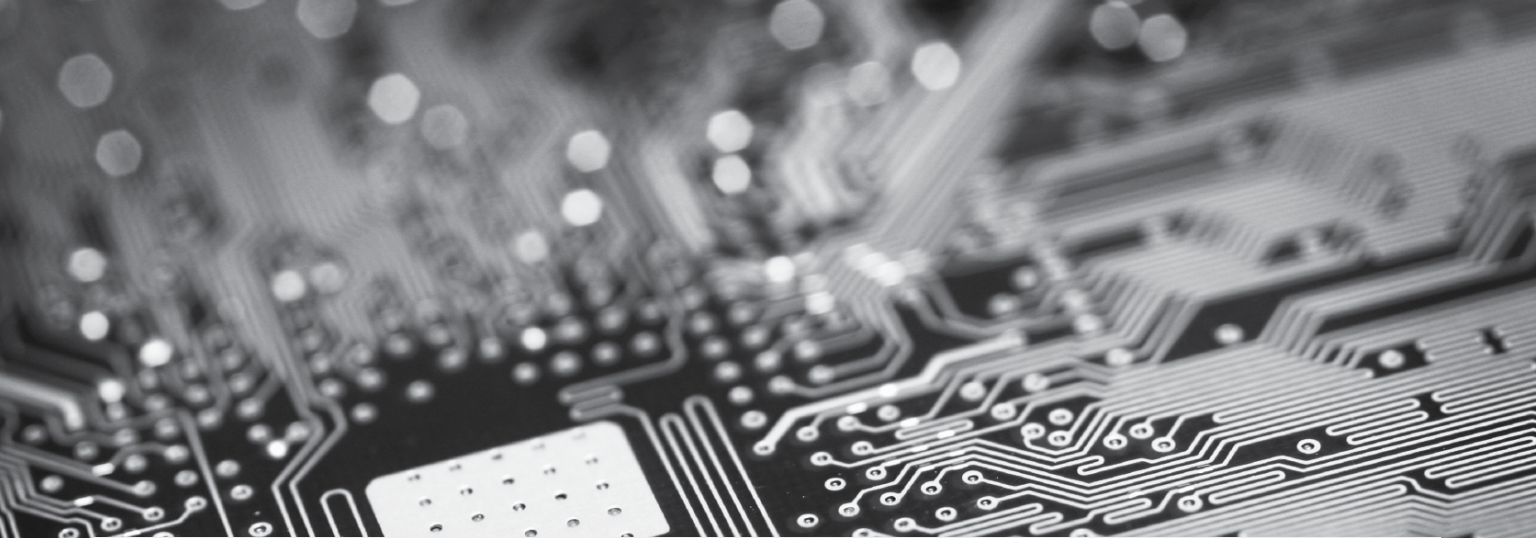
Significant mitigation of risk for the County's critical telecommunications equipment in the Building Industry Cross-connect (BIX) room.

3,500  
feet of cable removed

2,185  
feet of cable rerouted

4,150  
feet of cable installed

14,432  
square feet of physical space  
freed up for other County use

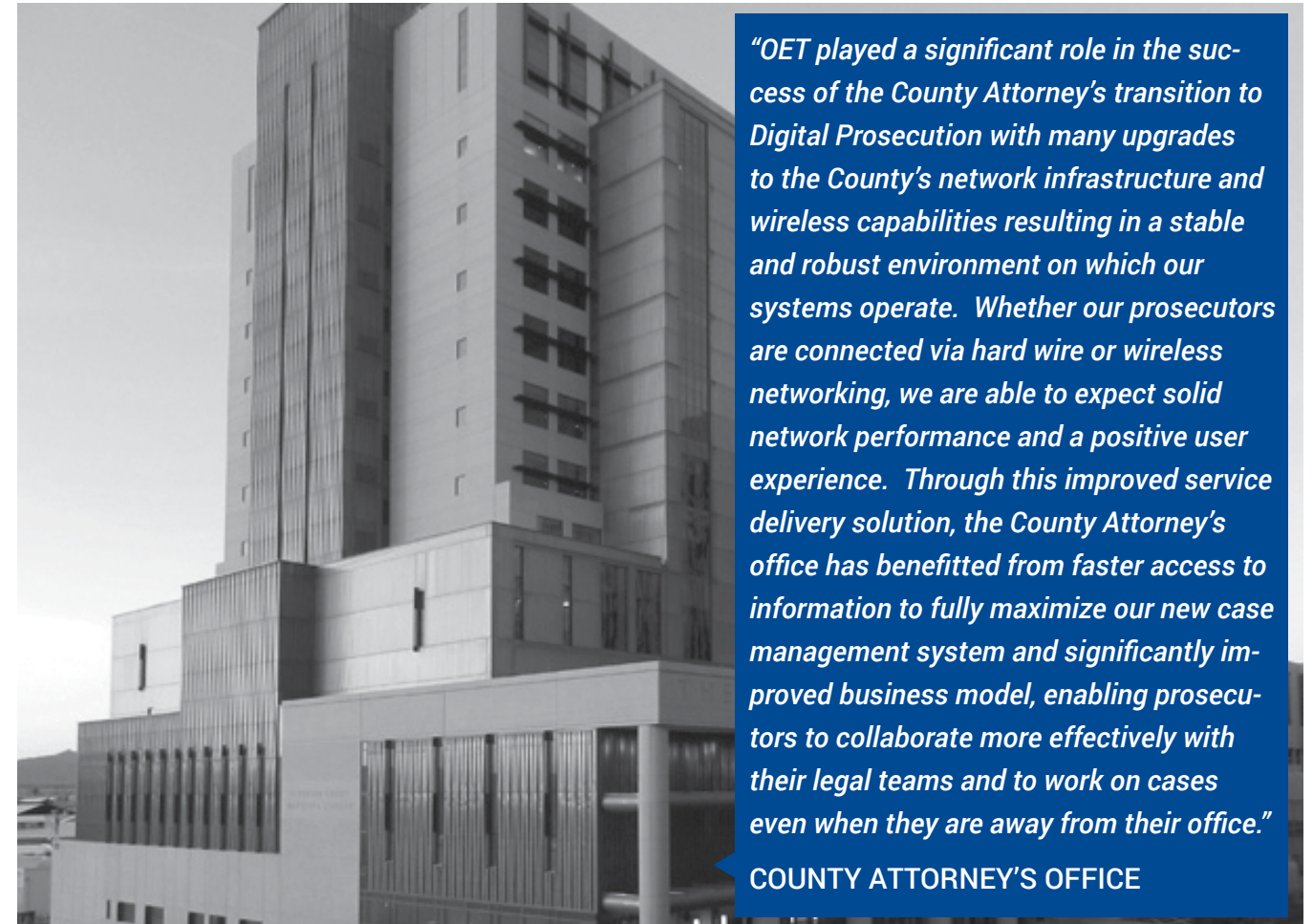


### Increased Bandwidth

Worked with CenturyLink, as our carrier services provider, to **evaluate current bandwidth demands and to project future demands required for technologies adopted by the County**, such as Voice over Internet Protocol (VoIP) telephones, Geographic Information Service (GIS), electronic filing, Unified Communications, and video conferencing to name a few.

#### BUSINESS VALUES:

- The evaluation resulted in a recommendation to adjust bandwidth on 132 circuits.
- OET negotiated with CenturyLink to have the one-time costs for the required and expensive construction activities waived for work like trenching to support new circuits, **resulting in a cost avoidance for Maricopa County of approximately \$5,868,056.**
- The Internet circuits also have Distributed Denial of Service (DDoS) protection and circuit diversity for increased reliability.
- The average bandwidth throughput has increased by 600% on average to many of the remote sites. This means many of our customers went from 10Mb/s to 100Mb/s or more significantly increasing the ability to access shared services.



*"OET played a significant role in the success of the County Attorney's transition to Digital Prosecution with many upgrades to the County's network infrastructure and wireless capabilities resulting in a stable and robust environment on which our systems operate. Whether our prosecutors are connected via hard wire or wireless networking, we are able to expect solid network performance and a positive user experience. Through this improved service delivery solution, the County Attorney's office has benefitted from faster access to information to fully maximize our new case management system and significantly improved business model, enabling prosecutors to collaborate more effectively with their legal teams and to work on cases even when they are away from their office."*

COUNTY ATTORNEY'S OFFICE

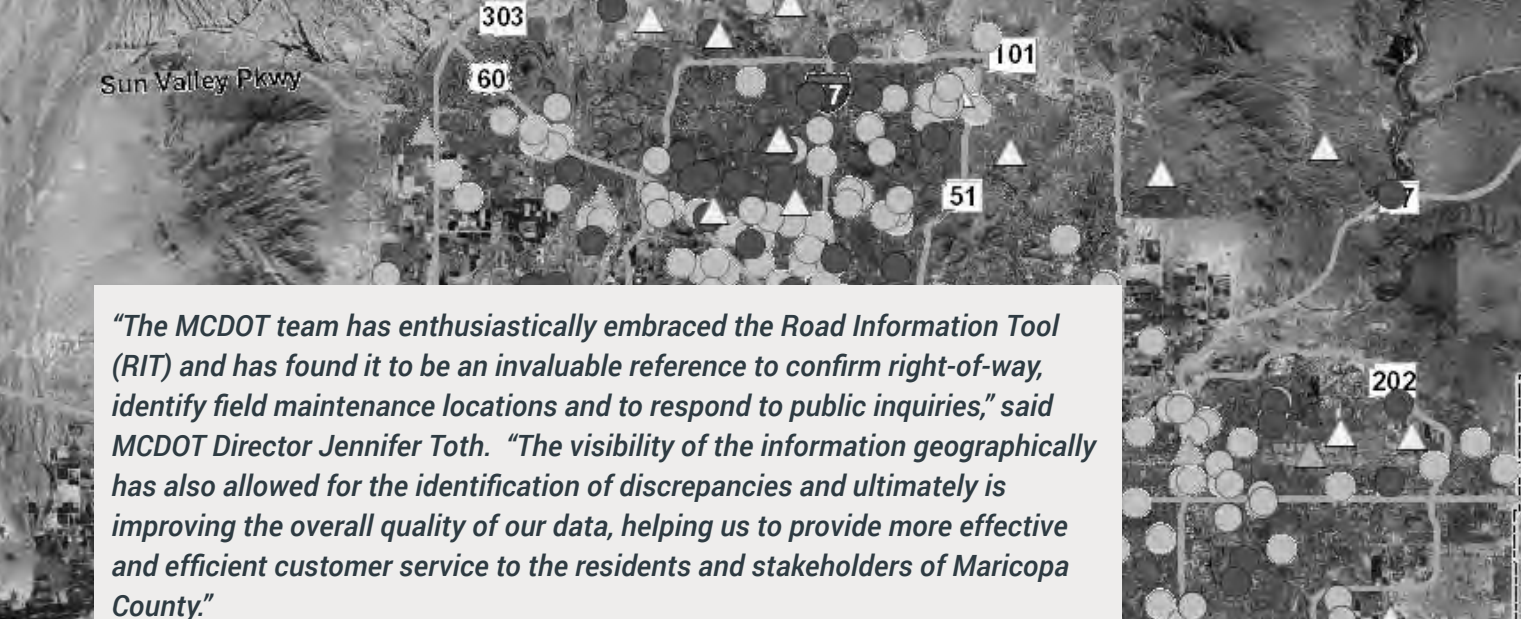
### South Court Tower Network for Public Defense

OET partnered with Public Defense to provide network connectivity in courtrooms within the South Court Tower. Improved network availability has enabled the Public Defense to leverage their investments in digital records.

#### BUSINESS VALUES:

- Mitigated problem of insufficient wireless service in spaces utilized by Public Defenders.
- Provided a more stable wired connection for Public Defenders.
- Created opportunity for increased efficiency and productivity by Public Defenders.





*"The MCDOT team has enthusiastically embraced the Road Information Tool (RIT) and has found it to be an invaluable reference to confirm right-of-way, identify field maintenance locations and to respond to public inquiries," said MCDOT Director Jennifer Toth. "The visibility of the information geographically has also allowed for the identification of discrepancies and ultimately is improving the overall quality of our data, helping us to provide more effective and efficient customer service to the residents and stakeholders of Maricopa County."*

## Geographic Information Services

- Collaborated with County departments to allow them to provide business value to their customers (e.g., MDOT's Public Road Information application and MCSO's Proof of Concept Command and Control application).
- Upgraded the physical infrastructure of the GIS virtual environment, which encompassed setup and configuration of over 60 virtual servers, reconfiguration and verification of over 35 web applications containing more than 140 GIS services, and the relocation of 80 terabytes of aerial imagery dating back to 1946.
- Total one-time implementation cost of the GIS virtualized server cluster to support current operations and future expansion was \$163,000. Going forward, the County is scheduled to implement six new application servers over three years. In the new environment, the County is able to achieve a cost saving of 30% for storage per terabyte and 75% for GIS software licensing per server, providing a total cost avoidance of \$1,044,000.



*"The Office of Enterprise Technology's commitment to COOP planning helps ensure all County departments will have the technological resources available to continue delivering public services during disaster."*

RICH PEEL, EMERGENCY SERVICES PLANNER,  
DEPARTMENT OF EMERGENCY MANAGEMENT

## Continuity of Operations Plan (COOP)

OET completed its Continuity of Operations Plan (COOP) in September 2016, utilizing the County's new COOP software. The COOP represents a very important effort to ensure the capability exists to continue essential department functions across a wide range of potential emergencies.



## LOOKING FORWARD



Published OET's FY 2017-19 Strategic Plan with a focus on the Customer Experience, Service Excellence, and Service Quality.  
**[www.maricopa.gov/1500/Technology](http://www.maricopa.gov/1500/Technology)**



**Office of Enterprise Technology**

301 S. 4th Ave.  
Phoenix, AZ 85003

**Tel** (602) 506-7116

 **@maricopacio**

 **Watch online**

**[www.maricopa.gov](http://www.maricopa.gov)**

